

Francisco de Borja Rodriguez

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9121728/publications.pdf>

Version: 2024-02-01

119
papers

1,276
citations

471371

17
h-index

477173

29
g-index

129
all docs

129
docs citations

129
times ranked

1088
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of Minority Class Variability on Anomaly Detection by Means of Random Forests and Support Vector Machines. Lecture Notes in Computer Science, 2021, , 416-428.	1.0	1
2	A Bio-Inspired Mechanism Based on Neural Threshold Regulation to Compensate Variability in Network Connectivity. Lecture Notes in Computer Science, 2021, , 569-580.	1.0	0
3	A Fine Dry-Electrode Selection to Characterize Event-Related Potentials in the Context of BCI. Lecture Notes in Computer Science, 2021, , 230-241.	1.0	2
4	Ensemble of diluted attractor networks with optimized topology for fingerprint retrieval. Neurocomputing, 2021, 442, 269-280.	3.5	5
5	Influence of bio-inspired activity regulation through neural thresholds learning in the performance of neural networks. Neurocomputing, 2021, 462, 294-308.	3.5	4
6	P300 Characterization Through Granger Causal Connectivity in the Context of Brain-Computer Interface Technologies. Lecture Notes in Computer Science, 2021, , 253-264.	1.0	0
7	Intrinsic and environmental factors modulating autonomous robotic search under high uncertainty. Scientific Reports, 2021, 11, 24509.	1.6	2
8	A Low-Cost Computational Method for Characterizing Event-Related Potentials for BCI Applications and Beyond. IEEE Access, 2020, 8, 111089-111101.	2.6	9
9	Automatic Adaptation of Model Neurons and Connections to Build Hybrid Circuits with Living Networks. Neuroinformatics, 2020, 18, 377-393.	1.5	8
10	A Classification and Data Visualization Tool Applied to Human Migration Analysis. , 2019, , .		1
11	Robust dynamical invariants in sequential neural activity. Scientific Reports, 2019, 9, 9048.	1.6	9
12	Ensemble of Attractor Networks for 2D Gesture Retrieval. Lecture Notes in Computer Science, 2019, , 488-499.	1.0	2
13	Fingerprint Retrieval Using a Specialized Ensemble of Attractor Networks. Lecture Notes in Computer Science, 2019, , 709-719.	1.0	2
14	RTHybrid: A Standardized and Open-Source Real-Time Software Model Library for Experimental Neuroscience. Frontiers in Neuroinformatics, 2019, 13, 11.	1.3	10
15	Algorithmic clustering based on string compression to extract P300 structure in EEG signals. Computer Methods and Programs in Biomedicine, 2019, 176, 225-235.	2.6	11
16	A Methodology for Retrofitting Privacy and Its Application to e-Shopping Transactions. , 2019, , 143-183.		1
17	Stimulus space complexity determines the ratio of specialist and generalist neurons during pattern recognition. Journal of the Franklin Institute, 2018, 355, 2951-2977.	1.9	6
18	An electrode selection approach in P300-based BCIs to address inter- and intra-subject variability. , 2018, , .		8

#	ARTICLE	IF	CITATIONS
19	Modeling Sustainability Reporting with Ternary Attractor Neural Networks. Lecture Notes in Computer Science, 2018, , 259-267.	1.0	3
20	Input Pattern Complexity Determines Specialist and Generalist Populations in Drosophila Neural Network. Lecture Notes in Computer Science, 2018, , 296-303.	1.0	1
21	Strategies to Enhance Pattern Recognition in Neural Networks Based on the Insect Olfactory System. Lecture Notes in Computer Science, 2018, , 468-475.	1.0	1
22	Privacy in e-Shopping Transactions: Exploring and Addressing the Trade-Offs. Lecture Notes in Computer Science, 2018, , 206-226.	1.0	0
23	Evolutionary Tuning of a Pulse Mormyrid Electromotor Model to Generate Stereotyped Sequences of Electrical Pulse Intervals. Lecture Notes in Computer Science, 2018, , 359-368.	1.0	2
24	Compression-Based Clustering of Video Human Activity Using an ASCII Encoding. Lecture Notes in Computer Science, 2018, , 66-75.	1.0	0
25	Automatic Treatment of Bird Audios by Means of String Compression Applied to Sound Clustering in Xeno-Canto Database. Lecture Notes in Computer Science, 2018, , 617-625.	1.0	0
26	Increase attractor capacity using an ensembled neural network. Expert Systems With Applications, 2017, 71, 206-215.	4.4	11
27	26th Annual Computational Neuroscience Meeting (CNS*2017): Part 3. BMC Neuroscience, 2017, 18, .	0.8	7
28	An approach of algorithmic clustering based on string compression to identify bird songs species in xeno-canto database. , 2017, , .		3
29	How to Reduce Classification Error in ERP-Based BCI: Maximum Relative Areas as a Feature for P300 Detection. Lecture Notes in Computer Science, 2017, , 486-497.	1.0	3
30	Exploring a Mathematical Model of Gain Control via Lateral Inhibition in the Antennal Lobe. Lecture Notes in Computer Science, 2017, , 317-326.	1.0	1
31	Capacity and Retrieval of a Modular Set of Diluted Attractor Networks with Respect to the Global Number of Neurons. Lecture Notes in Computer Science, 2017, , 497-506.	1.0	5
32	Analysis of Electoreception with Temporal Code-Driven Stimulation. Lecture Notes in Computer Science, 2017, , 101-111.	1.0	3
33	Effects of Locomotive Drift in Scale-Invariant Robotic Search Strategies. Lecture Notes in Computer Science, 2017, , 161-169.	1.0	2
34	Temporal Code-Driven Stimulation: Definition and Application to Electric Fish Signaling. Frontiers in Neuroinformatics, 2016, 10, 41.	1.3	8
35	Structured patterns retrieval using a metric attractor network: Application to fingerprint recognition. Physica A: Statistical Mechanics and Its Applications, 2016, 457, 424-436.	1.2	7
36	25th Annual Computational Neuroscience Meeting: CNS-2016. BMC Neuroscience, 2016, 17, 54.	0.8	81

#	ARTICLE	IF	CITATIONS
37	Online Event Detection Requirements in Closed-Loop Neuroscience. , 2016, , 81-91.		6
38	Privacy Threats in E-Shopping (Position Paper). Lecture Notes in Computer Science, 2016, , 217-225.	1.0	1
39	Discovering Data Set Nature through Algorithmic Clustering Based on String Compression. IEEE Transactions on Knowledge and Data Engineering, 2015, 27, 699-711.	4.0	9
40	Non-conventional Digital Signatures and Their Implementationsâ€™A Review. Advances in Intelligent Systems and Computing, 2015, , 425-435.	0.5	5
41	Regulation of specialists and generalists by neural variability improves pattern recognition performance. Neurocomputing, 2015, 151, 69-77.	3.5	16
42	An active, inverse temperature modulation strategy for single sensor odorant classification. Sensors and Actuators B: Chemical, 2015, 206, 555-563.	4.0	48
43	Controlling a Smartphone Using Gaze Gestures as the Input Mechanism. Human-Computer Interaction, 2015, 30, 34-63.	3.1	34
44	Delay-Dependent Response in Weakly Electric Fish under Closed-Loop Pulse Stimulation. PLoS ONE, 2015, 10, e0141007.	1.1	10
45	Specialist Neurons in Feature Extraction Are Responsible for Pattern Recognition Process in Insect Olfaction. Lecture Notes in Computer Science, 2015, , 58-67.	1.0	1
46	RETRIEVAL OF NOISY FINGERPRINT PATTERNS USING METRIC ATTRACTOR NETWORKS. International Journal of Neural Systems, 2014, 24, 1450025.	3.2	14
47	Design Principles for Cooperative Robots with Uncertainty-Aware and Resource-Wise Adaptive Behavior. Lecture Notes in Computer Science, 2014, , 108-117.	1.0	2
48	Improving NCD accuracy by combining document segmentation and document distortion. Knowledge and Information Systems, 2014, 41, 223-245.	2.1	6
49	On securing online registration protocols: Formal verification of a new proposal. Knowledge-Based Systems, 2014, 59, 149-158.	4.0	5
50	New X.509-based mechanisms for fair anonymity management. Computers and Security, 2014, 46, 111-125.	4.0	7
51	A formal methodology for integral security design and verification of network protocols. Journal of Systems and Software, 2014, 89, 87-98.	3.3	13
52	Methodological Security Verification of a Registration Protocol. Advances in Intelligent Systems and Computing, 2014, , 453-462.	0.5	0
53	Neural Trade-Offs among Specialist and Generalist Neurons in Pattern Recognition. Communications in Computer and Information Science, 2014, , 71-80.	0.4	1
54	Assisted closed-loops for brain-computer interfaces. BMC Neuroscience, 2013, 14, .	0.8	0

#	ARTICLE	IF	CITATIONS
55	Behavioral driving through on line monitoring and activity-dependent stimulation in weakly electric fish. BMC Neuroscience, 2013, 14, .	0.8	3
56	Event detection, multimodality and non-stationarity: Ordinal patterns, a tool to rule them all?. European Physical Journal: Special Topics, 2013, 222, 457-472.	1.2	9
57	Cryptanalysis of a one round chaos-based Substitution Permutation Network. Signal Processing, 2013, 93, 1358-1364.	2.1	92
58	Application of symbolic dynamics to characterize coordinated activity in the context of biological neural networks. Journal of the Franklin Institute, 2013, 350, 2967-2981.	1.9	2
59	Neural Sensitivity to Odorants in Deprived and Normal Olfactory Bulbs. PLoS ONE, 2013, 8, e60745.	1.1	7
60	Assisted closed-loop optimization of SSVEP-BCI efficiency. Frontiers in Neural Circuits, 2013, 7, 27.	1.4	31
61	Neuron Threshold Variability in an Olfactory Model Improves Odorant Discrimination. Lecture Notes in Computer Science, 2013, , 16-25.	1.0	6
62	Anonymity Revocation through Standard Infrastructures. Lecture Notes in Computer Science, 2013, , 112-127.	1.0	4
63	Detection Method for Phase Synchronization in a Population of Spiking Neurons. Lecture Notes in Computer Science, 2013, , 421-431.	1.0	0
64	Gliding and saccadic gaze gesture recognition in real time. ACM Transactions on Interactive Intelligent Systems, 2012, 1, 1-27.	2.6	22
65	Low cost remote gaze gesture recognition in real time. Applied Soft Computing Journal, 2012, 12, 2072-2084.	4.1	17
66	The use of artificial neural networks in electrostatic force microscopy. Nanoscale Research Letters, 2012, 7, 250.	3.1	5
67	Is the contextual information relevant in text clustering by compression?. Expert Systems With Applications, 2012, 39, 8537-8546.	4.4	8
68	Extending the bioinspired hierarchical temporal memory paradigm for sign language recognition. Neurocomputing, 2012, 79, 75-86.	3.5	22
69	Structured information in sparse-code metric neural networks. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 799-808.	1.2	9
70	Communication by identity discrimination in bio-inspired multi-agent systems. Concurrency Computation Practice and Experience, 2012, 24, 589-603.	1.4	5
71	Generalization of the Dynamic Clamp Concept in Neurophysiology and Behavior. PLoS ONE, 2012, 7, e40887.	1.1	25
72	Online video tracking for activity-dependent stimulation in neuroethology. BMC Neuroscience, 2011, 12, .	0.8	6

#	ARTICLE	IF	CITATIONS
73	A model study for causal relationships between voltage and calcium dynamics. BMC Neuroscience, 2011, 12, .	0.8	0
74	Bio-inspired design strategies for central pattern generator control in modular robotics. Bioinspiration and Biomimetics, 2011, 6, 016006.	1.5	30
75	Reducing the Loss of Information through Annealing Text Distortion. IEEE Transactions on Knowledge and Data Engineering, 2011, 23, 1090-1102.	4.0	33
76	Signature Neural Networks: Definition and Application to Multidimensional Sorting Problems. IEEE Transactions on Neural Networks, 2011, 22, 8-23.	4.8	15
77	Characterization of a clinical olfactory test with an artificial nose. Frontiers in Neuroengineering, 2011, 5, 1.	4.8	18
78	An Approach for Adapting Moodle into a Secure Infrastructure. Lecture Notes in Computer Science, 2011, , 214-221.	1.0	5
79	Gaze Gesture Recognition with Hierarchical Temporal Memory Networks. Lecture Notes in Computer Science, 2011, , 1-8.	1.0	5
80	Local Context Discrimination in Signature Neural Networks. Lecture Notes in Computer Science, 2011, , 400-408.	1.0	0
81	Flexible Entrainment in a Bio-inspired Modular Oscillator for Modular Robot Locomotion. Lecture Notes in Computer Science, 2011, , 532-539.	1.0	0
82	A PCA-based super-resolution algorithm for short image sequences. , 2010, , .		0
83	Influence of music representation on compression-based clustering. , 2010, , .		9
84	Generalized Image Charge Method to Calculate Electrostatic Magnitudes at the Nanoscale Powered by Artificial Neural Networks. Journal of Electromagnetic Waves and Applications, 2010, 24, 1145-1155.	1.0	11
85	Optimizing Hierarchical Temporal Memory for Multivariable Time Series. Lecture Notes in Computer Science, 2010, , 506-518.	1.0	12
86	DYNAMICAL INVARIANTS FOR CPG CONTROL IN AUTONOMOUS ROBOTS. , 2010, , .		1
87	An inverse problem solution for undetermined electrostatic force microscopy setups using neural networks. Nanotechnology, 2009, 20, 085702.	1.3	13
88	Block attractor in spatially organized neural networks. Neurocomputing, 2009, 72, 3795-3801.	3.5	8
89	Real-time activity-dependent drug microinjection. BMC Neuroscience, 2009, 10, .	0.8	12
90	RTBiomanager: a software platform to expand the applications of real-time technology in neuroscience. BMC Neuroscience, 2009, 10, .	0.8	16

#	ARTICLE	IF	CITATIONS
91	Techniques for temporal detection of neural sensitivity to external stimulation. <i>Biological Cybernetics</i> , 2009, 100, 289-297.	0.6	10
92	Structured information in small-world neural networks. <i>Physical Review E</i> , 2009, 79, 021909.	0.8	17
93	Real-time control of stepper motors for mechano-sensory stimulation. <i>Journal of Neuroscience Methods</i> , 2008, 172, 105-111.	1.3	17
94	Superresolution imaging: a survey of current techniques. <i>Proceedings of SPIE</i> , 2008, , .	0.8	18
95	Contextual information retrieval based on algorithmic information theory and statistical outlier detection. , 2008, , .		4
96	Evaluating the Impact of Information Distortion on Normalized Compression Distance. <i>Lecture Notes in Computer Science</i> , 2008, , 69-79.	1.0	10
97	Origin and role of neural signatures in bursting neurons. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
98	Information and Topology in Attractor Neural Networks. <i>Neural Computation</i> , 2007, 19, 956-973.	1.3	17
99	A two-step neural-network based algorithm for fast image super-resolution. <i>Image and Vision Computing</i> , 2007, 25, 1449-1473.	2.7	26
100	Reaction to neural signatures through excitatory synapses in central pattern generator models. <i>Neurocomputing</i> , 2007, 70, 1797-1801.	3.5	7
101	Temporal structure in the bursting activity of the leech heartbeat CPG neurons. <i>Neurocomputing</i> , 2007, 70, 1792-1796.	3.5	8
102	Neural Signatures: Multiple Coding in Spiking“bursting Cells. <i>Biological Cybernetics</i> , 2006, 95, 169-183.	0.6	37
103	Realistic Stimulation Through Advanced Dynamic-Clamp Protocols. <i>Lecture Notes in Computer Science</i> , 2005, , 95-105.	1.0	12
104	Accurate and Robust Image Superresolution by Neural Processing of Local Image Representations. <i>Lecture Notes in Computer Science</i> , 2005, , 499-505.	1.0	4
105	Networks of neurons that emit and recognize signatures. <i>Neurocomputing</i> , 2004, 58-60, 41-46.	3.5	4
106	Effect of individual spiking activity on rhythm generation of central pattern generators. <i>Neurocomputing</i> , 2004, 58-60, 535-540.	3.5	17
107	Analysis of perfect mappings of the stimuli through neural temporal sequences. <i>Neural Networks</i> , 2004, 17, 963-973.	3.3	8
108	Mutual Information and Topology 2: Symmetric Network. <i>Lecture Notes in Computer Science</i> , 2004, , 20-25.	1.0	0

#	ARTICLE	IF	CITATIONS
109	A Hybrid MLP-PNN Architecture for Fast Image Superresolution. Lecture Notes in Computer Science, 2003, , 417-424.	1.0	8
110	Stochastic Networks with Subthreshold Oscillations and Spiking Activity. Lecture Notes in Computer Science, 2003, , 32-39.	1.0	0
111	A discrete model of neural ensembles. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2002, 360, 559-573.	1.6	2
112	Characterization of Triphasic Rhythms in Central Pattern Generators (I): Interspike Interval Analysis. Lecture Notes in Computer Science, 2002, , 160-166.	1.0	13
113	Characterization of Triphasic Rhythms in Central Pattern Generators (II): Burst Information Analysis. Lecture Notes in Computer Science, 2002, , 167-173.	1.0	12
114	Period Focusing Induced by Network Feedback in Populations of Noisy Integrate-and-Fire Neurons. Neural Computation, 2001, 13, 2495-2516.	1.3	7
115	Periodic and synchronic firing in an ensemble of identical stochastic units: Structural stability. Lecture Notes in Computer Science, 1999, , 367-376.	1.0	3
116	Efficient Learning in Boltzmann Machines Using Linear Response Theory. Neural Computation, 1998, 10, 1137-1156.	1.3	137
117	Mean field approach to learning in Boltzmann Machines. Pattern Recognition Letters, 1997, 18, 1317-1322.	2.6	3
118	Stability and hebbian learning in populations of probabilistic neurons. Lecture Notes in Computer Science, 1997, , 433-442.	1.0	2
119	Modeling the Sequential Pattern Variability of the Electromotor Command System of Pulse Electric Fish. Frontiers in Neuroinformatics, 0, 16, .	1.3	1